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10/775,668	02/09/2004	Robert Mack	5087-0143	1456

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EXAMINER	
TAYONG, HELENE E	
ART UNIT	PAPER NUMBER
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/775,668	MACK ET AL.	
	Examiner	Art Unit	
	HELENE TAYONG	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,9-12 and 15-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,9-12 and 15-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/5/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Acknowledgement is made of amendment filed 5/8/08.

Request for Continued Examination

2. The request filled on 5/8/08 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 10775668 is acceptable and RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1,9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raphaeli (US 2004/0202229 A1) in view of Tsubouchi et al (US 6061342) (see IDS).

(1) with regards to claims 1 and 16;

Raphaeli discloses (in fig. 1) an encoder comprising:

a spread spectrum encoder (fig. 1, 14) configured to encode data values with one or more spread spectrum codes and generate a corresponding spread spectrum encoded data stream (pg. 3, [0033]); and

Raphaeli discloses all of the subject matter discussed above, but for specifically teaching a slip encoder configured to encode other data values into the encoded data stream by varying time spacing between the spread spectrum codes, wherein the other data values correspond to an amount of clock periods inserted by the slip encoder between the generation of adjacent spread spectrum codes so that generation of every first entire spread spectrum code is completed and then a time gap with no spread spectrum code is inserted before starting .generation of every second adjacent spread spectrum code, where the time gap between ending every first spread spectrum code and beginning every second adjacent spread spectrum code is proportional to one of the other data values and a time delay position in completing transmission of every entire second adjacent Spread spectrum code corresponds to the time gap.

However, Tsubouchi et al in the same endeavor (spread spectrum, CDMA) discloses in (fig. 2, (3), (4), figs. 3, 5 and 8) a slip encoder configured to encode other data values (3) into the encoded data stream (3, 5) by varying time spacing between the spread spectrum codes (s2), wherein the other data values correspond to an amount of clock periods inserted (fig.5A, dummy data) by the slip encoder between the generation of adjacent non-overlapping spread spectrum codes (col.3, lines 17-67 and col. 4, lines 15-65) .

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have utilized the method as taught by Tsubouchi et al in the method of Raphaeli in order to provide a code division multiple access apparatus which is capable of high-speed synchronization, is simple in construction, and moreover,

achieves reduced consumption of electric power during standby (col. 1, lines 65-76 and col. 2, lines 1-2).

(2) with regards to claim 9;

Raphaeli discloses a spread spectrum decoder (fig. 2, 52) configured to decode data from a spread spectrum encoded data stream (fig. 1); and

Raphaeli discloses all of the subject matter discussed above, but for specifically teaching a slip decoder configured to decode additional data associated with different time gaps between codes in the spread spectrum encoded data stream, wherein the additional data values correspond to an amount of time delay detected between adjacent spread spectrum codes in the spread spectrum encoded data stream, the amount of time delay being a time gap when no spread spectrum codes are being transmitted where the time gap starts after a first spread spectrum code has been completely transmitted and the time delay ends before a second adjacent spread spectrum code begins being transmitted so that the entire first spread spectrum code and the entire second adjacent spread spectrum code provide portions of the decoded data and the time gap between the entire first spread spectrum code and the entire second adjacent spread spectrum code corresponds with some of the additional data.

However, Tsubouchi et al in the same endeavor (spread spectrum, CDMA) discloses in (fig. 1, (3), (4), figs. 3, 5, 6 and 8) a receiver (col.3, lines 1-65 and col. 4, lines 15-65).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have utilized the method as taught by Tsubouchi et al in the method of Raphaeli in order to provide a code division multiple access apparatus which is capable of high-speed synchronization, is simple in construction, and moreover, achieves reduced consumption of electric power during standby (col. 1, lines 65-76 and col. 2, lines 1-2).

5. Claims 4, 5, 6, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raphaeli (US 2004/0202229 A1) in view of Tsubouchi et al (US 6061342) (see IDS) as applied in claims 1,9 and 16, and further in view of the Admitted prior Art, (fig. 2 and fig. 3).

(1) with regards to claim 4;

Raphaeli discloses a spread spectrum (SS) encoder (fig.2, 52). Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for specifically teaching that the spread spectrum includes a storage device used for storing the one or more spread spectrum codes and a shifter for serially encoding some of the data values with the one or more spread spectrum codes.

However, the admitted art teaches the spread spectrum encoder includes a storage device used for storing the one or more spread spectrum codes and a shifter (pg. 2,lines 7-9).

One of ordinary skill in the art would have clearly recognized that to increase the data transmission rate in SS system and improve performance, a storage device used

for storing the one or more spread spectrum codes and a shifter for serially encoding some of the data values with the one or more spread spectrum codes was required. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a storage device and the shifter to the SS system of Raphaeli as modified by Tsubouchi et al in order to have codes ready as needed by the shift register.

(2) with regards to claim 5;

Raphaeli discloses a spread spectrum encoder (fig.2, 52). Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for (a) specifically teaching the spread spectrum encoder includes a multiplexer having inputs for receiving different chips of the spread spectrum codes and an output.

(b) specifically teaching the spread spectrum encoder includes a code counter coupled to the multiplexer sequentially selecting different chips of the spread spectrum codes for outputting from the multiplexer.

(c) specifically teaching that the spread spectrum encoder includes an exclusive-OR circuit combining the outputs from the multiplexer with the data values .

1) Regarding item (a)

However, the admitted art teaches the spread spectrum encoder includes a multiplexer having inputs for receiving different chips of the spread spectrum codes and an output (col.pg.2, lines 9).

One of ordinary skill in the art would have clearly recognized that to select one of many data-sources and outputs that source into one channel, a multiplexer that

sequentially selects different chips would have help to reduce cost. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a multiplexer having inputs for receiving different chips of the spread spectrum codes and output to the SS system of of Raphaeli as modified by Tsubouchi et al in order to ensure accuracy codes.

2) Regarding item (b)

However, the admitted art teaches the spread spectrum encoder includes a code counter coupled to the multiplexer sequentially selecting different chips of the spread spectrum codes for outputting from the multiplexer (pg. 2, lines 9-10).
One of ordinary skill in the art would have clearly recognized a code counter coupled to the multiplexer would control the data in the multiplexer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a code counter to the SS encoder of of Raphaeli as modified by Tsubouchi et al in order to ensure accuracy of the system.

3) Regarding item (c)

However, the admitted art, teaches the spread spectrum encoder includes an exclusive-OR circuit combining the outputs from the multiplexer with the data values (pg. 2, lines 14-15).

One of ordinary skill in the art would have clearly recognized that an exclusive-OR circuit combining the outputs from the multiplexer with the data values helps to invert each chip, which helps to spread the PN codes. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an

exclusive-OR circuit to the SS encoder of of Raphaeli as modified by Tsubouchi et al in order to ensure accuracy of codes transmitted.

(3) with regards to claim 6;

Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for wherein the slip encoder includes a slip counter that delays the code counter from outputting the chips for adjacent spread spectrum codes according to associated data values.

However, the admitted art teaches the spread spectrum encoder includes However, the admitted art teaches the spread spectrum encoder includes a wherein the slip encoder includes a slip counter that delays the code counter from outputting the chips for adjacent spread spectrum codes according to associated data values (pg.5, [0056]).

One of ordinary skill in the art would have clearly recognized a code counter coupled to the multiplexer would control the data in the multiplexer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a code counter to the SS encoder of of Raphaeli as modified by Tsubouchi et al in order to ensure accuracy of the system.

(4) with regards to claim 11;

Raphaeli discloses a spread spectrum encoder (fig. 2, 52). Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for

(a) specifically teaching that the spread spectrum decoder includes a storage device used for storing one or more reference spread spectrum codes.

(b) specifically teaching that a sampling circuit taking samples of the spread spectrum encoded data stream and comparing the samples with the reference spread spectrum codes.

1) Regarding item (a)

However, the admitted art teaches the spread spectrum encoder (fig. 22). The spread spectrum decoder includes a storage device used for storing one or more reference spread spectrum codes (fig. 3, 40, pg2, lines 20-21)

One of ordinary skill in the art would have clearly recognized that a storage device used for storing one or more reference spread spectrum codes would have reserved the codes and later generated by shift register later. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a storage device in the decoder to the SS system of Raphaeli as modified by Tsubouchi et al in order to have codes as needed or required by the shift register.

2) Regarding item (b)

However, the admitted art, teaches the spread spectrum encoder (fig. 22) teaches that a sampling circuit taking samples of the spread spectrum encoded data stream and comparing the samples with the reference spread spectrum codes (pg.2, lines 21-22) (pg.2, lines 25-26).

One of ordinary skill in the art would have clearly recognized that a sampling circuit taking samples of the spread spectrum encoded data stream and comparing the

samples with the reference spread spectrum codes would have help to determine if accurate data was received. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a sampling circuit taking samples of the spread spectrum encoded data stream and comparing the samples with the reference spread spectrum to the SS system of Raphaeli as modified by Tsubouchi et al in order to ensure security.

(5) with regards to claim 12;

Raphaeli discloses a spread spectrum encoder (fig. 2, 52). Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for specifically teaching that the spread spectrum encoder includes a match counter counting a number of chips for the reference spread spectrum codes that match and mismatch the samples taken by the sampling circuit and identifying data values according to the number of counted matches and mismatches.

However the admitted art, teaches the spread spectrum encoder (fig. 2) that includes a match counter (pg.3, lines 5-7).

One of ordinary skill in the art would have clearly recognized that a match counter coupled would help control the data.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a match counter to the SS system of Raphaeli as modified by Tsubouchi et al in order to ensure that adequate data was transmitted.

6. Claims 10, 15, 17, 18, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raphaeli (US 2004/0202229 A1) in view of Tsubouchi et al (US 6061342) (see IDS) as applied in claims 1, 9 and 16 and further in view of Van Driest (US 6115411).

(1) with regards to claim 10;

Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for specifically teaching that a number of time units associated with the time gaps correspond with different data values.

However Van Driest in the same endeavor teaches that a number of time units associated with the time gaps correspond with different data values (one microsecond time, col. 6, lines 62-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method of Van Driest in the method of Raphaeli as modified by Tsubouchi et al in order to increase data transmit rate.

(2) with regards to claim 15;

Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for specifically teaching a data inverter identifying inverted data values output from the slip decode and inverting bits for the identified inverted data values.

However Van Driest in the same endeavor teaches a data inverter identifying inverted data values output from the slip decode and inverting bits for the identified inverted data values (col.9, lines 35-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method of Van Driest in the method of Raphaeli as modified by Tsubouchi et al in order to increase data transmit rate.

(3) with regards to claim 17;

Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for specifically teaching delaying encoding between each of the first set values into the encoded data stream for inserting a number of time increments between adjacent PN codes corresponding to the second set of data values.

However Van Driest in the same endeavor teaches delaying encoding between each of the first set values into the encoded data stream for inserting a number of time increments between adjacent PN codes corresponding to the second set of data values (col.7, lines 6-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method of Van Driest in the method of Raphaeli as modified by Tsubouchi et al in order to increase data transmit rate.

(4) with regards to claim 18;

Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for specifically teaching transmitting and receiving the encoded data stream using a wireless Universal Serial Bus (USB) device.

However Van Driest in the same endeavor teaches transmitting and receiving the encoded data stream using a wireless Universal Serial Bus (USB) device (IEEE 802.11 standard, col. 5, lines 29-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method of Van Driest in the method of Raphaeli as modified by Tsubouchi et al in order to increase data transmit rate.

(5) with regards to claim 19;

Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for specifically teaching extracting the first set of data from the encoded data stream by identifying the PN codes in the encoded data stream and extracting the second set of data from the encoded data stream by identifying an amount of time gap between the identified PN codes.

However Van Driest in the same endeavor teaches extracting the first set of data from the encoded data stream by identifying the PN codes in the encoded data stream and extracting the second set of data from the encoded data stream by identifying an amount of time gap between the identified PN codes (col. 7, lines 58-68 to col.8, lines 1-4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method of Van Driest in the method of Raphaeli as modified by Tsubouchi et al in order to increase data transmit rate.

(6) with regards to claim 20;

Raphaeli as modified by Tsubouchi et al discloses all of the subject matter as described above except for specifically teaching comparing samples of the encoded data stream with reference PN codes; identifying bits in the second set of data values according to the amount of identified time slip, identifying an amount of time slip between the identified bits in the first set of data values.

However Van Driest in the same endeavor teaches comparing samples of the encoded data stream with reference PN codes (Col. 8, lines 1-4),
identifying bits in the second set of data values according to the amount of identified time slip. (col. 8, lines 8-12), identifying an amount of time slip between the identified bits in the first set of data values (col. 7, lines 57-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method of Van Driest in the method of Raphaeli as modified by Tsubouchi et al in order to increase data transmit rate.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kim et al (US 6115609) discloses a method for grouping and

ungrouping omni-cells in a mobile communications system using common PN-offset in a one channel so as to manage a plurality of cells in a manner similar to a method by which an omni-cell is managed using a unique PN offset.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELENE TAYONG whose telephone number is (571)270-1675. The examiner can normally be reached on Monday-Friday 8:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Liu Shuwang can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Helene Tayong/
Examiner, Art Unit 2611
July 18, 2008
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611